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NORTHEAST CAPE FEAR RIVER, N. C.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORT ON
PRELIMINARY EXAMINATION OF NORTHEAST CAPE FEAR
RIVER, N. C., FOR A DISTANCE OF ABOUT 3 MILES ABOVE HIL-
TON BRIDGE.

FEBRUARY 27, 1914.—Referred to the Committee on Rivers and Harbors and ordered
to be printed, with illustration.

WAR DEPARTMENT,
Washington, February 26, 1914.

TO THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit herewith a letter from the
Chief of Engineers, United States Army, dated 25th instant,
together with copy of report from Maj. H. W. Stickle, Corps of Engi-
neers, dated August 15, 1913, with map, on preliminary examination
of Northeast Cape Fear River, N. C., made by him in compliance
with the provisions of the river and harbor act approved March
1913.

Very respectfully,

LINDLEY M. GARRISON,
Secretary of War.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, February 25, 1914.

TO: The Chief of Engineers, United States Army.

FROM: The Secretary of War.

SUBJECT: Preliminary examination of Northeast Cape Fear River, N. C.

There is submitted herewith, for transmission to Congress, report
dated August 15, 1913, with map, by Maj. H. W. Stickle, Corps of

Engineers, on preliminary examination of Northeast Cape Fear River, N. C., for a distance of about 3 miles above Hilton Bridge, called for by the river and harbor act approved March 4, 1913.

2. Northeast Cape Fear River is about 130 miles in length and empties into Cape Fear River at Wilmington, N. C. The present project for its improvement, adopted in 1889, provides for clearing the natural channel for small steamers to Hallsville, and for power boats to Kornegays Bridge. The lower portion of the river is included in the project for improvement of Cape Fear River at and below Wilmington, under which a depth of 26 feet at mean low water has been obtained from the mouth of the Northeast Branch to Hilton Bridge. In the first mile above this bridge are located three fertilizer plants and one sawmill. The vessels used in bringing in raw materials to the fertilizer plants usually draw 18 to 22 feet, and under present conditions it is necessary to lighten them to a considerable degree before they can proceed to the factories. The improvement apparently desired is a channel 22 feet deep for the purpose of obviating this difficulty. In the opinion of the district officer the local river is worthy of improvement by the General Government, and he recommends that the preparation of estimates be authorized. The division engineer concurs in this recommendation.

3. This report has been referred, as required by law, to the Board of Engineers for Rivers and Harbors, and attention is invited to the board's report herewith, dated November 18, 1913. In connection with its study of the subject the board made a personal inspection of the locality and held a public hearing at Wilmington, N. C., October 17, 1913. The board invites attention to previous investigations of this locality, the most recent of which was made in compliance with the river and harbor act approved February 27, 1911, reports on which are printed in House Document No. 1356, Sixty-second Congress, third session. In reviewing the report on survey the board expressed the opinion, in which the Chief of Engineers concurred, that it is advisable for the United States to undertake construction of a channel 150 feet wide and 22 feet deep, as proposed by the district officer, at an estimated cost of \$50,750 and an annual maintenance charge of \$3,000, provided local or other interests contribute one-half the estimated cost of first construction. The board now reports that conditions, physical and commercial, are practically the same as at the time of the former report, and it therefore renews, without modification, the recommendations previously made by it.

4. After due consideration of the above-mentioned reports, I concur with the views of the Board of Engineers for Rivers and Harbors and therefore report that the improvement by the United States of Northeast Cape Fear River, N. C., for a distance of about 3 miles above Hilton Bridge is deemed advisable to the extent and under the conditions heretofore recommended in the report printed in House Document No. 1356, Sixty-second Congress, third session.

EDW. BURR,
*Colonel, Corps of Engineers,
Acting Chief of Engineers.*

REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS.

[Third indorsement.]

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
November 18, 1913.

the CHIEF OF ENGINEERS, UNITED STATES ARMY.

This is a report on preliminary examination of Northeast Cape Fear River, N. C., for a distance of about 3 miles above Hilton Bridge. Northeast Cape Fear River empties into the Cape Fear River proper at Wilmington, N. C., and from its mouth to the bridge is under improvement in connection with the main river to a depth of 26 feet at mean water. Above the bridge there is a shoal for a distance of about 100 feet, with a natural depth of channel of about 12 feet. Private enterprise, however, has increased this depth to about 15 feet.

Within the limits of the reach under consideration are located on the right bank three fertilizer factories at points about 3,000, 4,000, and 5,000 feet above the bridge. It is stated that the vessels handling the business of these companies usually draw 18 to 22 feet, necessitating under present conditions a considerable amount of storage. The total commerce of the river is given as 165,000 tons, of which amount 58,955 tons pertain to the fertilizer factories and to a timber mill located on the left bank. In addition to this waterborne commerce, about 37,000 tons of phosphate rock are reported to be received by rail, and it is claimed this would have been carried by river if there had been sufficient depth.

The district officer states that it is difficult to get light draft vessels to carry phosphate rock, and that those available, drawing at 20 feet, must be lightered at Wilmington to the extent of 700,000 tons. If a depth of 20 or 22 feet were available, lightered rock could be received direct at a saving of about 30 cents per ton, and would also enable these factories to save the cost of transporting at 45 per cent of other materials from Wilmington to the factories by rail or lighters.

The district officer believes the locality worthy of improvement and recommends that the General Government and recommends that an estimate of cost be authorized. The division engineer concurs in recommending an estimate, but favors a channel of more commodious dimensions, both in width and depth, in order to make the improvement reasonably permanent.

The board, through a committee of its members, made an inspection of this locality on October 17, 1913, and held a public hearing in the city of Wilmington, which was attended by a number of persons of interest. A copy of the proceedings, containing the statements and arguments advanced in behalf of the improvement, is herewith.

This improvement has been considered on two previous occasions. The act of March 3, 1909, provided for a preliminary examination of the river from its mouth for a distance of $2\frac{1}{2}$ miles, with a view to securing a depth of 20 feet. A survey was made and an estimate prepared for a channel 20 feet deep and 150 feet wide, the cost being placed at \$37,000. Local interests claimed they would be satisfied with a depth of 18 feet, which it was estimated would cost

\$26,500. There were at that time two fertilizer factories interested and the board, after full consideration of the facts, stated:

There appears to be no reason to believe that the river above Hilton Bridge will be utilized for general commercial purposes in the near future, and the board does not believe that the United States would be justified in extending the harbor facilities above Hilton Bridge for the almost exclusive benefit of two concerns, especially in view of their unwillingness to cooperate in the work.

The report was therefore unfavorable.

7. Again, under date of January 13, 1913, under authority of the act of February 27, 1911, after a third factory had been put in operation, the board reported as follows:

From the information now available it appears that the three fertilizer industries located about a mile above the head of the deep-water project at Wilmington have now a considerable tonnage that would be affected by a more commodious channel and that such a channel would result in a material saving in the handling of the heavier commodities. The improvement is very largely in the interest of these concerns, and a direct benefit would accrue to them and an indirect benefit to the general public.

In view of the conditions existing here, it seems to the board that these interests should contribute at least toward the work of first construction if the improvement is undertaken by the United States. A letter from them to the district officer states for reasons given, "we should not be called upon to share in the expense of this improvement, but that the same should be done and maintained by the Government and further, "should you, after considering the above facts, still feel that we should bear a portion of the expenses, that we should be glad to have you advise us what portion in your judgment we should pay in order to secure the desired and necessary improvement."

After careful consideration the board reports that in its opinion the conditions present and prospective, justify the Federal Government in participating in the improvement under proper conditions of cooperation, and that it is advisable for the United States to undertake the construction of a channel 150 feet wide and 22 feet deep, as proposed by the district officer, at an estimated cost of \$50,750 and an annual maintenance charge of \$3,000, provided local or other interests will contribute one-half the estimated cost, \$25,375, of first construction.

8. The present investigation is practically identical with that referred to in the above quotation, and while there appears to be a strong desire for improvement by the special interests concerned, supplemented by those of the Chamber of Commerce of Wilmington, the board found conditions, physical and commercial, practically the same as at the time of the former report. It was argued that the benefits to be derived from the improvement were of such a general character and would be so far-reaching that the immediate local interests should not be called upon to contribute toward the work, but that the entire cost should be borne by the General Government. While some indirect benefit might and probably would be felt by the general public, an examination of existing conditions indicates clearly to the mind of the board that especial and particular benefits would accrue to the fertilizer factories concerned. In view of the considerable expense to the United States involved in the maintenance of the channel for an indefinite period of years, the board considers that the contribution of one-half the first cost by those directly benefited would not be unreasonable or onerous. Moreover, it believes that as a matter of self-interest they would embrace the opportunity of having the work done on these conditions if the estimate of the advantages to be derived from the work be correct.

9. In view of the foregoing, the board reports in concurrence with its former recommendation that the United States undertake the construction of a channel 150 feet wide and 22 feet deep, at an

ted cost of \$50,750 and an annual maintenance charge of \$3,000, provided local or other interests will contribute one-half the estimated cost.

10. In compliance with law, the board reports that there are no questions of terminal facilities, water power, or other related subjects which could be coordinated with the suggested improvement in such manner as to render the work advisable in the interests of commerce and navigation.

For the board:

W. M. BLACK,
Colonel, Corps of Engineers,
Senior Member of the Board.

PRELIMINARY EXAMINATION OF NORTHEAST CAPE FEAR RIVER, N. C.

UNITED STATES ENGINEER OFFICE,
Wilmington, N. C., August 15, 1913.

From: The District Engineer Officer.
To: The Chief of Engineers, United States Army,
(Through the Division Engineer).
Subject: Preliminary examination, Northeast Cape Fear River, N. C.
This is a report on the preliminary examination of Northeast Cape Fear River, N. C., for a distance of about 3 miles above Hilton Head, provision for which was made in the river and harbor act approved March 4, 1913. The duty of making this preliminary examination was assigned to this office by department letter of March 1913.
Assistant Engineer Robert C. Merritt, of this office, who has been connected with the improvement of this river for many years, submits the following report, which seems to cover the situation and is based on thorough knowledge thereof:

Previous examinations of this river are published in the Annual Report of the Chief of Engineers and House documents as follows:

Date of examination.	Published in annual report.		Published in House document.			Portion of river.	Nature of report.
	Year.	Page.	No.	Congress.	Session.		
1885	1128	71	48	2	Whole river.....	Unfavorable, but recommended removing obstructions near mouth.	
1890	1181	35	51	1	do.....	Favorable.	
1895	1389	322	53	3	Lower 2½ miles.....	Unfavorable.	
		229	59	1	Whole river.....	Continuation of project recommended; no additional improvement.	
		867	61	2	Lower 2½ miles....	Favorable, provided interested parties would pay two-thirds of cost.	
		1356	62	3	Whole river.....	Favorable for the lower portion, provided interested parties would pay half of cost.	

The river has been under improvement since 1889, the project of that date being in force and including the clearing of the natural channel for small steamers to

Hallsville, 88 miles above Wilmington, and for pole boats to Kornegays Bridge. During the past 10 years no work has been done above Chinquepin.

Northeast Cape Fear River rises in the extreme northern part of Duplin County and flows in a general southerly direction through Pender and New Hanover Counties and empties into the main Cape Fear River at Wilmington. It has a total length about 130 miles (70 miles in a straight line). In its upper portion it is about 12 miles distant from the Atlantic Coast Line Railroad; during the lower 90 miles it is never more than 6 miles away from this railroad.

From its mouth to some distance beyond the limits contemplated in this examination its general direction is north and south. Its width at its mouth is about 750 feet. It narrows down to 600 feet at a point $1\frac{1}{4}$ miles above its mouth, where it is crossed by the Hilton Railroad bridge, operated by the Atlantic Coast Line and Seaboard Air Line Railroad Companies. This bridge is provided with a draw span having a width of about 60 feet. However, the draw span is not in the best natural depth. Above the bridge it widens rapidly to 1,500 feet in a distance of half a mile. It then narrows to a width of 600 feet within the next $1\frac{1}{2}$ miles, and remains about this width to 2 miles above the bridge, the point to which the examination contemplated by the act has been carried. This portion of the stream is tidal, there being a tidal range of about $2\frac{1}{2}$ feet.

A portion of the city of Wilmington lies along this branch of the Cape Fear River from its mouth to the bridge. This lower portion of the river has always been considered as a part of Cape Fear River at and below Wilmington and has been improved by the appropriations made for that work. Under the project for that work a depth of 26 feet at mean low water has been obtained from the mouth of the Northeast Branch to Hilton Bridge.

The deep-water channel extends only a short distance above Hilton Bridge. The river is then obstructed by a shoal about 4,500 feet long, which separates deep water near the bridge from deep water farther upstream, where a deep pocket is found. The highest point of the shoal is found in midstream opposite the mouth of Smith Creek. The channel ordinarily used passes to the westward of this point.

There are located on the western bank of this portion of the river three fertilizer plants, as follows: About 3,000 feet above the bridge, American Agricultural Chemical Co.'s plant; 4,000 feet above, Virginia-Carolina Chemical Co.'s plant; and 5,000 feet above, Swift Fertilizer Works. On the eastern bank, about 600 feet above the bridge, is located Camp Manufacturing Co.'s sawmill. Two of these fertilizer plants and the sawmill have been in operation for several years, but the third fertilizer plant—that of the American Agricultural Chemical Co.—was completed and started operations during the latter part of 1911.

These fertilizer factories receive their raw material from abroad or from distant ports in the United States in seagoing vessels. The maximum draft that could be carried to their factories when first established was about 12 feet. The Swift Co. in 1906 and 1912, and the American Agricultural Chemical Co., in 1912, did some dredging in the channel between their plants, so that now about 15 feet can be carried to these plants at mean low water, but only about 7 feet can be carried to the deep water pocket above. As the vessels used in the trade usually draw 18 to 22 feet it is necessary that they be lightened to a considerable degree before they can proceed to the factories.

The commerce for this river for the calendar year ending December 31, 1912, is as follows (season of navigation, navigable the entire year):

Freight traffic.

Articles.	Amount in customary units.	Amount in short tons.	Value.	Average haul or distance freight was carried.	Rate per ton-mile.
UPSTREAM.					
Brick.....	14,500	36	\$108	50	
Coal..... tons..	2,500	2,500	10,000	50	
Cottonseed meal.....sacks..	750	38	1,140	52	
Fertilizer..... tons..	3,060	3,060	91,800	52	
Fertilizer materials.....do....	40,980	40,980	819,600	2	(1)
General merchandise.....do....	2,512	2,512	376,800	52	
Grain..... bushels..	6,600	185	6,475	52	
Hay..... bales..	2,400	120	3,360	52	
Lumber.....feet..	50,000	100	1,000	25	
Machinery..... tons..	95	95	9,500	40	
Total.....		49,626	1,319,783		

¹ Cargo.

Freight traffic—Continued.

Articles.	Amount in customary units.	Amount in short tons.	Value.	Average haul or distance freight was carried.	Rate per ton-mile.
DOWNSTREAM.					
on.....bales..	1,194	298	74,500	52	.053
onseed.....tons..	271	271	5,420	52	.035
sties.....number..	119,000	7,438	52,066	50	(1) .22
s.....crates..	930	23	9,200	52	(2) .22
ilizers.....tons..	1,100	1,100	33,000	2	(2)
stock:					
Cattle.....head..	60	15	1,500	52	.035
Hogs.....do.....	300	15	3,000	52	.035
lumber.....feet..	24,000,000	48,000	480,000	51	(2)
is.....number..	750,000	188	1,128	50	(2)
try.....head..	3,960	8	1,600	52	.18
uts.....bushels..	6,500	91	7,280	52	.042
toes.....do.....	650	20	140	52	.035
n.....barrels..	3,600	576	17,280	55	.02
gles.....number..	5,925,000	2,963	23,704	40	(2)
entine:					
Crude.....barrels..	200	30	900	55	.025
spirits.....casks..	575	129	23,220	55	.06
ber.....feet..	17,010,889	51,032	204,128	35	(3)
d.....cords..	3,500	3,500	14,000	35	(2)
Total.....		115,697	952,066		

RECAPITULATION.

ght traffic:				
Upstream	49,626	\$1,319,783
Downstream	115,697	952,066
Total	165,323	2,271,849

¹ Rafted and flatted.

² Flatted.

³ Rafted.

. These statistics show a total commerce up and down stream of 165,323 tons, valued at \$2,271,849, of which the following originated or terminated on the first 3 miles above Hilton Bridge, or in the portion covered by this examination: Fertilizer materials, 40,980 tons, valued at \$819,600; fertilizer, 2,975 tons, valued at \$89,250; and 100,000 tons of timber and lumber, valued at \$60,000. Total, 58,955 tons, valued at \$968,850.

In addition to the above, these factories received by rail during the last calendar year 37,306 tons of phosphate rock, valued at \$223,836, which they claim would have come by vessel if they had had sufficient depth of water up to their works. During the same time they were compelled to take out of deep-draft vessels at Wilmington and to be carried by rail and lighters to their factories, 34,067 tons of fertilizer materials, valued at \$681,380.

. As the depth of water in the river below Wilmington is increased, the draft of vessels coming to Wilmington correspondingly increases; this being the case especially with foreign vessels bringing fertilizer and fertilizer materials.

. It is difficult to get light-draft vessels to carry phosphate rock; only vessels carrying about 1,800 tons, drawing about 20 feet, can be obtained. Such vessels require lighterage at Wilmington of from 700 to 800 tons before they can reach the factories. This increases the cost and makes it cheaper to receive this rock by rail. A depth of 20 to 22 feet to these factories would enable them to place this rock at

the factories by water at a saving of about 30 cents per ton, and also enable them to save the cost of transporting about 45 per cent of other materials from Wilmington to the factories by rail or lighter.

If there were sufficient depth of water up to these fertilizer works more of their interior factories would be supplied through these factories, but under present conditions they are compelled to divert cargoes from Wilmington to Charleston and Savannah, in order to save the extra expense of lightering at Wilmington, and ship to interior factories from these ports. During the present calendar year a steamer having 3,200 tons of pyrites ore for Wilmington and 1,500 tons for Charleston was paid a bonus by the factories to go to Charleston first so that the vessel would not be drawing so much water when she arrived at Wilmington.

The insufficient depth of water causes delays and hinders the prompt discharge of vessels, and much complaint has been made by masters, agents, and owners of vessels on account of these delays. All of these things have a tendency to give Wilmington a bad reputation with American and foreign vessel owners and agents.

6. A map of the stream from Hilton Bridge to a point 3 miles above is submitted herewith.

7. The fertilizer factories are equipped with suitable wharves and modern unloading facilities.

■ On this part of the river there is little if any opportunity for the establishment of general transportation wharves, terminals, or transfer facilities, and no probability that such will ever be needed. The harbor would here be purely an industrial one for the benefit of the materials utilized in manufacturing interests immediately on the banks, and they can be relied on to provide such terminals as they may need. No water power, reclamation, flood control, or drainage is involved with the improvement.

8. In my opinion the locality is worthy of improvement by the General Government, and it is recommended that the preparation of estimates be authorized. No survey will be required.

H. W. STICKLE,
Major, Corps of Engineers

[First indorsement.]

OFFICE DIVISION ENGINEER, SOUTHEAST DIVISION,
August 16, 1912

To the CHIEF OF ENGINEERS.

1. The portion of the Northeast River under consideration is shoaled because it has an abnormal width. The river comes down with a very good depth until it strikes this wide portion, then it shoals up until it gets down near the bridge, where it again narrows and again becomes deep.

2. In my opinion, it is perfectly useless to dredge out a narrow channel in front of these wharves. It will fill in very rapidly, and the only kind of a channel that will be reasonably permanent is one that is sufficient to have a modifying effect upon the regimen of the river in this vicinity and to exert a decided influence upon the flow of the water. Above the point marked (B) deep water follows the contour

ore, as it should. When it comes down opposite (B) it ought to make an easy crossing, striking the right-hand shore about the upper end of the Swift Fertilizer Co. buildings, then it should follow this line downward to the bridge. If a channel not less than 300 feet in width and 23 or 24 feet in depth is dug along these lines, I think that may be reasonably permanent. That is, its cost of maintenance will be reduced to the minimum.

3. The work ought to be done with a hydraulic dredge and the material deposited so as to shoal up this area, particularly along the downstream side of the crossing and also to bank up the material toward the eastern shore, taking care not to close the mouths of the tributary creeks. The work ought to be done for 10 or 11 cents a yard, and I would advise that an estimate be prepared with this object in view.

DAN C. KINGMAN,
Colonel, Corps of Engineers.

[For report of the Board of Engineers for Rivers and Harbors, see page 3.]

MEETING HELD AT ROOMS OF CHAMBER OF COMMERCE, WILMINGTON, N. C., BY THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS, OCTOBER 17, 1913, AT 2 P. M.

Present: Lieut. Col. William C. Langfitt, Corps of Engineers; Lieut. Col. Harry Taylor, Corps of Engineers; and Lieut. Col. H. C. Newcomer, Corps of Engineers, members of the Board of Engineers for Rivers and Harbors.

Col. LANGFITT. The meeting will come to order. The river and harbor act of February 27, 1911, contained a provision for a preliminary examination, and possibly a survey, of the Northeast River, and as a result of that provision of law a preliminary examination was had, which was reported favorably for a survey. The survey was made, and the district officer reported in favor of the improvement in question. The report was referred to the Board of Engineers for Rivers and Harbors, as required by law. Since the board was not fully convinced that the United States should undertake the work alone, and as a result of the conditions presented, it finally recommended that the work be undertaken by the United States, and maintained by the United States after completion, upon condition that local interests contribute one-half of the cost of the execution of the work. Under this report the local interests were to contribute one half of the cost of the work and the United States to contribute the other half of the cost, and in addition the maintenance of the work after completion devolved upon the Government. This report of the board was apparently not satisfactory, as the river and harbor act of March 4, 1912, had the item again inserted, except that the limits of the improvement were extended some distance upstream—distance of about 3 miles above the bridge. A preliminary examination was required by this act, and this has been made, and a report thereon submitted by Maj. McKel, which is in favor of the improvement; and, as required by law, that report is before the Board of Engineers for Rivers and Harbors. The board has not as yet made its report, and in order to be fully apprised of all the circumstances of the case, whether or not it should modify its previous recommendation of a half-and-half operation, it has come down to Wilmington, by a committee of its members, to look over the ground itself and to hear any further arguments that the local interests might desire to submit to it in confirmation of their view that the United States should bear a larger part than one-half, if not all, of the expense of the work desired. There appears to be no question but what the work will be of great benefit to the plants along the river there; the question at issue is largely one by whom should this work be done, and what proportion of the cost should be borne by local interests, and what part by the United States; and it is mainly upon that question that information is desired. The board will now be glad to hear from anyone who has anything to say on the subject, and in this connection I will request that those speaking give their names to the stenographer, so that a full record can be had.

Mr. J. A. TAYLOR. Gentlemen, I speak on behalf of the Wilmington Chamber of Commerce, and I will say that this organization has on various occasions indorsed this project. Mr. Chairman, with your permission, I will read from a paper which has

been prepared, from which some insight may be gathered as to the extent and capitalization and importance of the industries already located on this portion of the river. (Reads:) "Memorandum. There are located on the Northeast River, within a distance of one mile and a half north of Hilton Bridge, the following industries: American Agricultural Chemical Co., Virginia Carolina Chemical Co., Swift's Fertilizer Co., Camp Lumber Co.

"These properties are capitalized at \$1,500,000; have an annual pay roll of \$355,000; turn out manufactured product annually of 150,000 tons; reship to interior factories crude material to the amount of 20,000 tons.

"Present depth of water, 16 feet high tide; proposed depth of water, 22 feet low tide; cost of improvement, \$52,000.

"Present depth of water involves lightering annually 35,000 tons of material at a cost of \$9,000. Phosphate rock from Florida moved by rail, 37,000 tons, at an excess cost over water transportation of \$10,000.

"Estimated increase of water-borne tonnage in raw material of 50,000 tons with depth of 22 feet of water.

"General Government has improved Ashley River 4 miles for the accommodation of fertilizer factories without any contribution of expense from private interests.

"Location of fertilizer factories north of Hilton Bridge made necessary by city ordinance." (Exhibit A.)

Now, Mr. Chairman, I understand that this hearing proceeds upon the idea that the work in question is justified, and the question is, Who should bear the expense—the Government of the United States itself, or a portion of the amount expended in the execution of this improvement should be contributed by local interests? I think there is no question as to the need of the improvement. The need of the improvement is such as to satisfy the Government that it should be made. Therefore I submit the matter simply hinges upon this point: Is it a project of such importance—great importance, I will say—as to justify the Government undertaking its cost, or justify the Government to take the position of requiring a certain financial cooperation from its citizens in the vicinity? Now, what is the line that divides or separates a public improvement from a private interest—a public interest from a private interest? I submit this line is not finely drawn. Is it not a matter of fact that all public improvements have their initial steps in furtherance of private interests? If you eliminate the direct benefit accruing to special interests, will you have a Government appropriation to do public work? Is not all private work of benefit to the public; and on the other hand is not positively all public work of benefit to private interests as well as to the general public? I maintain that the principal beneficiaries of all public work are the private interests; and I will say that if you eliminate all public work upon the ground that private interests are participants in the benefits, or beneficiaries thereof, there will be no public improvements. The principal beneficiaries of all public improvements are undeniably the various private interests along or adjacent to the improvement. I submit the whole theory of the improvements of our public waterways are predicated upon this basis. The actual beneficiary receiving the benefit of an improvement is of course the community at large, but this benefit is derived only through the full and comprehensive use or application of such benefit, or improvement I should say, by private interests. The ability afforded by the improvement to charter vessels or ships of a larger size and a greater depth in order to bring commodities necessary for use in the plant of the private interest is simply utilized by those interests and the benefit goes to the public—a benefit the public would not and could not realize unless through the private interests. The territory reached by this improvement is not merely localized, but is reflected in Norfolk, in Charleston and as far as Savannah. Mr. Chairman, in the case before us the private interests up the river here can have no hope of having the municipality of Wilmington subsidize by a system of taxation in this improvement. They are entirely out of the city limits—in fact, they would not be allowed to operate their plant within the city corporate limits—there is a law against it. Therefore the question of taxing the abutting property or any other property in the city for aid in this matter is not to be considered. In the city I believe there is a standard by which certain abutting property is taxed to bear its proportionate share, but on the water front I do not believe the abutting property is taxed for water improvements. It is a fact that the city of Wilmington is old enough to be much larger than it is at present, but only last year an attempt was made to assess abutting property for certain improvements, and I will say that the improvements in question were of great and peculiar value to the abutting property. Now, the proposition north of here on this river I submit, gentlemen, represents a capitalization, more tonnage, more possibilities, even beyond our expectations, than any improvement ever had on this Cape Fear River; and these facts, I submit, are matters for your earnest consideration. By this improvement you will make possible

increase of something like 50,000 tons a year. This means a saving of \$19,000—out 30 per cent of the cost. The ability to charter ships of a larger tonnage and draft of extreme importance in this case. You all well know that every day the size of boats is increasing, and I submit it as a proposition without fear of contradiction that the larger the size and consequently larger carrying capacity of the vessel, the greater the decrease in the unit cost of carrying goods. Twenty-two feet of water here would enable raw material to be supplied cheaper, and the effects would be immediately felt all through this section of the country, both in the interior portions, but in other sections of the country as well. It would decrease the cost of supplies and products in all portions of the country tributary to this section. It would certainly invite the location of other plants and enterprises in this section, and in every way afford greater benefits to the entire section of this country than any proposition we have here. Now, when you have a proposition of this character, with such great benefits to be naturally derived from it, with such an appropriation by Congress for its execution, with such a wide reach of territory to be benefited, and all can be accomplished with the expenditure by the Federal Government of a few thousand dollars—a considerable proportion of the cost coming back in the very first year by or through the saving of cost of lighterage and reduction in freight charges alone, I submit you have before you a proposition worthy of the most serious consideration—a proposition whose ratio of return to the Government on the investment is exceptional—a proposition which, in my opinion, in all its elements is one that is worthy of being undertaken entirely by the Government, and that there are no elements here which would justify the Government in changing its usual policy in carrying on works of public improvement. Gentlemen, I believe the Government should carry on this work, and that there are no special conditions or circumstances which would justify the Government in not undertaking the work. Now, these properties being located up there as they are, and because they can not come within the city limits—fertilizer factories not being allowed to be established or operated within the municipal corporate limits, the objection being because of the injurious results from the fumes—they must remain up there. You can not establish these plants to the south of the city, because of the prevailing winds which would carry the fumes of the plant over or into the city, and therefore they can not locate there. They can not locate, under any condition, in the city itself. So there is no alternative but for them to remain where they are now located. Therefore, gentlemen, of necessity they have located where they now are—must go where the best navigation is afforded. And when you consider what it means to this port of Wilmington, and to the country dependent upon this industry, I say that because these people have located where they are, they should not be considered as a private interest, but rather that the matter is one of the greatest public importance, and one that the Government should itself take charge of. You can't get away from the proposition, I submit it is final and controlling. Now, on the other side of the river is a sawmill plant, and I will say that this plant, like the phosphate factories, could not locate elsewhere. It is true that it was to their interest to locate there—I assume that is why they selected the site. They owned the site, the lumber comes to them there, and another site would not have given them access to their lumber without an expensive haul. You will find that these plants are located where their business calls for the location. I refer to the Camp mill which I believe one of the gentlemen had pointed out to you this morning. He has an excellent plant, and I am advised that because of the lack of water transportation he has been forced to divert a large part of his output from water-borne commerce to rail, because he can not command ships of a sufficient size to carry his goods, and therefore he is compelled to resort to the more expensive method of rail transportation. Now, these lumber plants up there are absolutely dependent on good water transportation facilities. It is true that there is a good depth up to Wilmington—I believe a depth of from 26 to 30 feet—but that depth does not extend up to these plants. So, because of inability to carry vessels to these plants, they are cut off by their 16 feet of water, and might as well be removed a hundred miles as the distance they are. It absolutely cuts them off from water competition. You can readily see the disadvantage under which they are placed. Gentlemen, I can state that is the case here, and I present these matters to you simply from a public viewpoint. Personally, I have not a dollar's interest in these businesses. It is simply my sense of obligation on the part of Wilmington, and the interest which the Wilmington Chamber of Commerce—the representative business body of this city—has in this matter. I say personally I have not a dollar's interest in this business up there—I am in the wholesale grocery business—and what I have to say is based upon my sense of obligation to this community and the interests involved; and I hope that I have been able to remove the impression that this matter should be judged as a private matter when it is a public matter. Gentlemen, if you have any questions you desire answered I shall be glad to answer them if I can do so.

Colonel LANGFITT. I think there is one point which might be cleared up—the saw mill plant to which you refer has, I believe, 22 feet of water now at its wharf; and the reason they can not get vessels to come to their wharf I think should be explained a little fuller by some one. That is a point, however, which can come up later. I shall be glad to hear from any gentleman present.

Mr. R. L. PAYNE. I will say that I am a representative of one of the companies interested in this improvement, we having a large plant up the river. Some time back we made the petition to your board—the petition of 1912, I believe, which we feel laid before you gentlemen practically all the facts that we had. We felt at that time that you would appreciate the amount of money that we had invested to construct our plant, and the exact location and conditions. I am glad that you have been up there and can see for yourselves what has been done. Now, from our location up there we are considered a seaboard factory; but we have not the benefits of the seaboard. We are brought into direct competition with Charleston, Savannah and Norfolk. Last year we were unable to meet the competition of Charleston, 125 cents a ton cheaper, and they took a large amount of business. We could not ship the finished product because Charleston underbid us 25 cents a ton. That will show how close our business is done. The gentleman who has just spoken here mentioned the lumber interests across the river. Now, those people there, as you gentlemen well know, have 22 feet of water, but from what I can learn from them they have not the vessels coming here to load. There are very little outside products coming here by sail or chartered vessel. We say that if we could have water enough to bring rock-carrying vessels into the port of Wilmington, and to our factory, that we would bring close to 37,000 tons a year here by water in cargo lots of from 1,000 to 1,800 tons. That would give the port of Wilmington that many vessels a year seeking outbound cargoes, in our case alone. At other ports along the coast the vessels bring in their cargo of rock, and take out other cargoes. At Savannah, for instance, they bring in their cargo of rock, and then take lumber to Norfolk, or to Tampa, or to other ports along the coast with coal. Therefore you are able to get much cheaper rates for lumber, or anything else, than when you have to send to New York or Baltimore and ask a single vessel to come down. I think that will explain Mr. Camp's situation to you. If the outgoing lumber had the advantages of shipping by these vessels, the competition would reduce the freight rates to what they were here many years ago. Our people located their plant here, believing that Wilmington was going to grow, and because we found it necessary that we should have a factory site in North Carolina, and I say we felt confident that we would have water to bring our vessels in—that Wilmington would not allow her deep water line to remain at the bridge where it has been for 25 years now. We freely expended money up there putting the plant in. We have expended in the neighborhood of a million and a half or two millions of dollars, and we think that you gentlemen should now give the proper depth of water. If you gentlemen give us this water, we will bring our fertilizer material for this plant here—particularly the foreign material. We have branch establishments which would be supplied through this factory—one at Spartanburg and one at Columbia, and we could take the material for them through the unloading plant, which you saw this morning—transferring into cars without calling upon the railroad and paying them excessive operating charges; and as Mr. Taylor very well said, we feel that we are not a private interest, or I will add, a land-development scheme. We are expending a large amount of money each year in this immediate section. I will say, gentlemen, that I am not going to make an extended address, but I have a paper here which I desire to file, which I think sets forth fully our views on this matter.

Paper received and filed. Marked "Exhibit B."

Col. LANGFITT. Why was the plant placed in its present position instead of being at the railroad facilities—below instead of above?

Mr. PAYNE. I believe the Virginia Chemical was the first plant located up there which had railroad facilities. I don't believe land could have been found unoccupied up there. I will state that we have been compelled to expend some one hundred and fifty thousand or two hundred thousand dollars that we never counted on—in making fills and other improvements.

Col. LANGFITT. How about the land below—any better or worse?

Mr. PAYNE. The land there is all low. Below it is mostly quite low—rice fields, and no railroad facilities. All the land there is low, and at times overflowed—used one time for rice fields.

Col. LANGFITT. Your railroad connection, I believe, is by a spur track?

Mr. PAYNE. Yes, sir; there is a spur track running to the Virginia Chemical.

Col. LANGFITT. Then, really, on account of the existing facilities you located there?

Mr. PAYNE. That was one of the reasons; another reason was that the acid used in our plant might escape into the river and do considerable damage, and we did not want to pay ourselves liable. Up there, there was less liability of our acid getting into the river and doing damage.

Col. NEWCOMER. Assuming your company should contribute one-half the cost, say, \$10,000, and the Government assume the other half, and thereafter the maintenance, which may be assumed to be about 10 per cent, I understand you would save \$19,000 on such an investment—pretty good business proposition, isn't it?

Mr. PAYNE. Well, yes; from a business standpoint that is a good proposition; but at the same time you must bear in mind that we have to pay the same taxes we are now paying. We have to pay the Government tax, and the State tax, and the county tax. We are also paying the city of Wilmington the same taxes that any enterprise on the water has to pay. I submit this should be taken into consideration. But if we had the same depth of water as they have here in Wilmington—26 feet, I believe it is—so we could bring our boats in and take them out, it would place us then on the same footing as Wilmington, and in that case that depth of water was made for them by the Government. Our claim is, gentlemen, we are just as much of a public enterprise as the rest of the community—

Col. NEWCOMER. In a sense, yes; no doubt that is true in a sense; but you have everything up there very closely localized—the other project is here to Wilmington, and if you could get the benefits of it, it is probably true that it would be of benefit to the public. But it looks to me like a good business proposition to save \$19,000 a year, and have the benefits which you state would accrue to the people, as well as the land you own up there—

Mr. PAYNE. Colonel, right there I wish to say that the interests up there had to buy large tracts of land—entire farms. In fact, we have more land up there than we want. It was necessary to purchase the large tracts in order to get the water frontage secured. Now, if we should be called upon to pay one-half of the cost of this project for 26 feet, we maintain that the owners of other property, which I may say is as yet undeveloped, would receive the greatest value in the increase. I think much more would go to them than to the industries up there. Their property would be increased in value very much. The benefit to us would be in our being able to get in and out in larger boats, and consequently larger cargoes, and at a cheaper cost. Our argument is for the Government to make this improvement, which would result in more commerce and perhaps make the land available for use; but at the same time let us, as same as the rest of the public, derive the benefit.

Col. NEWCOMER. Mr. Payne, the estimated tonnage given here to-day is the entire output of your plant—interior and outside?

Mr. PAYNE. The entire output, as I understand it.

Col. NEWCOMER. I understand the figures as to this saving of \$19,000 are based upon two factors: Lighterage, \$9,000; and the other saving—\$10,000—upon bringing your products from Florida points by boats instead of by rail?

Mr. TAYLOR. It would appear that from this saving there would be a resultant profit, but in this day of commercial activity and keen competition you will find that a difference of 5 cents a ton on their raw material—every bit of this saving would be of advantage, of great advantage I will assert, in the matter of competition, and would actually result in benefit to the public, giving them the benefit of this difference.

Col. LANGFITT. It is possible that is true in a competitive zone, but it is not true in our own zone, where competition is practically absent.

Mr. TAYLOR. You must understand that the fertilizer business or industry here is peculiarly situated. The Wilmington factories here do a large business over in Georgia, as well as in the interior sections of the State of North Carolina. They make large shipments of the raw material to their plants in the interior. The competition is very keen, and this saving of 5 cents a ton would absolutely tend to reduce the cost to the ultimate consumer, who is located in the interior. These people, for instance, have to meet the competitive price of plants on the Ashley River, which the Government has improved without this contributory plan. Therefore these people here are placed in sharp and active competition with Savannah, and Charleston as well. It is simply a matter of price as between Wilmington and Charleston and Savannah. I was very much interested in a letter written some time ago by Col. Wright in regard to the effect upon wheat—how the transportation charges are reflected to a long distance, even to trans-Atlantic ports. The cost of transportation to the seaboard was materially reduced, and the effects were felt all over the country. Now, right here we have one of the largest cotton shippers in the country, if not in the world. The plants get their cotton from the interior, bring it here by rail or by boat—whichever method best suits their purpose—then compress it, and his shipments are made mostly to foreign ports in chartered vessels. By chartering these vessels at a low rate, or unit cost, the benefit is reflected wherever he purchases the cotton. So the producer

in Georgia or Alabama or the Carolinas is the ultimate beneficiary of the lower rate. The same theory will apply to the fertilizer factories up the river here. When you bring the material to their doors, you supply what they need in their business, and when this can be done at a saving, and where there is already sharp competition, you will find that the cost to the ultimate consumer is reduced. In other words, the benefits go to the entire public and not to the manufacturer; the final consumer would reap the benefit.

Col. NEWCOMER. I think, Mr. Taylor, it is entirely proper to assume that a portion of this reduction would go to the consumer——

Mr. TAYLOR. I am satisfied it would all go to the consumer——

Col. NEWCOMER. I hardly think it proper to make that assumption. You have a zone here where there is no competition——

Mr. TAYLOR. But then you have the antitrust law, which prohibits all forms of agreement between manufacturers to control their prices. In fact, if an agreement were made, you could not enforce it against them, and for myself I believe that agreements of this character have ceased to exist. I think the only industry to-day in this country which, under the law, is not competing is the railroad industry. They can not compete under the law, but if you laid aside the law for 24 hours you would see a different result. Their rates are now fixed, and they would get in trouble with the Government if they failed to comply. In addition, if they made an agreement as to rates the probability is they would not keep it. But these industries up here are on a different basis. There is no zone from which competition is absent in the business—no zone in which immunity from competition is found.

Col. NEWCOMER. Assuming, for a moment, that to be true—that all the saving goes to the consumer—would it not be entirely reasonable to say that the consumer would receive only a part of the benefit, and that a part of this saving would go to the manufacturer—not all to the consumer?

Mr. TAYLOR. No; I think all would go to the consumer; that the consumer would be the ultimate beneficiary of this saving. The individual amount going to each consumer would undoubtedly be small and would constitute but a small fraction of the cost to him, but there is where the benefit would finally be placed. Now, gentlemen, I will state that if it were not for our private interests there would never be a public improvement. The initiation of every public improvement springs in every instance from private interests. The Government does not commence or undertake any improvement unless there is a necessity therefor, and I submit that while the necessity may be predicated upon the demands of a private interest, yet the inevitable result is that the entire people derive the benefit. The improvement is made and maintained for the benefit of the general public, and while a private interest like any individual, may participate in the benefits which the Government had in mind, yet I submit that this case shows it is a public interest which would be served and not a private interest. It is a work for the public good, and I submit that it is a reasonable and proper assumption that the public interests are the ones the Government has in view when it undertakes the prosecution of a work of this character—not the individual interest, although individual interests may be benefited by the work and probably would be. Such being my understanding of the matter, I do not see how it would be just or proper for the Government to insist upon private interests contributing to an improvement the purpose and object of which is for the benefit of the general public of which such private interests form merely a portion or small part.

Col. LANGFITT. I shall be glad to hear from anyone else who desires to speak where there is any such.

Mr. E. D. WILLIAMS. I have a record here which covers a number of years. This is a record of vessels showing the size and tonnage, and the increase in the size of cargo vessels since practically 1877. We had in 1877 an average size of sailing vessel carrying cargo of about 1,000; at this time it runs from 17,000 to 18,000. At the present time, I can say that one ship now in carrying cotton will take out what it then took 10 sailing vessels to carry. Our increase in commerce has been very great; has increased with the depth of water. Now, gentlemen, at the time I began navigating the Cape Fear River—the spring or summer of 1866—there has been a great increase both in depth and in the size of vessels coming here. I will say I have taken particular notice from that time up to the present. I have watched the progress which has been made. Then we only had about half the depth of water we have now—some 13½ or 14 feet from Wilmington to the sea on the spring tides. Now it is about double the depth we had then—increased right along—24, 25, and 26 feet down to the sea. Gentlemen, you probably know that the Northeast Branch of the Cape Fear River is the most suitable branch we have for affording facility to establish factories of different kinds on account of the bluffs along the river. Above Swift's factory you will find a high bluff—Tidburys, I believe—the next is Rock Side or Point, and there are others,

here we have not the facilities. I am speaking from my observation. Here we have only rice fields, or flat lands, extending back some considerable distance from the banks—come right up to the banks of the river. On this Northeast Branch of the Cape Fear River we have several sawmills—two of them large and two small. At one of them they got their material up the river—floated it down and then cut it up; and then they ship it from there. Now, they could ship to far greater advantage if they had a sufficient depth of water so vessels carrying a large cargo could come up to them. This improvement would be of great advantage to the sawmill industry. The small class of vessels that can carry their lumber cost more than the large-size vessels, and so it is not profitable for them to ship that way. Now if they want to ship from the deep water down here, the lumber must be brought down here, which is expensive to them. There is no profit in shipping by the small vessels—you have to ship a good-sized cargo, 100,000 to 500,000 feet to make a profit. The large vessels draw at least from 20 to 25 feet and they save time and expense, and this I will say is not always the case. I am sure that if we had this improvement the vessels would make five trips here then where they make one now. The present trouble is we haven't the deep water for them, and therefore the vessels can't load or unload.

1. NEWCOMER. About what is the draft now of the lumber-carrying coastwise vessels coming to this port?

2. WILLIAMS. I should say about 18 or 20 feet—something like that.

1. NEWCOMER. To what points are these cargoes of lumber shipped?

2. WILLIAMS. To the north principally: New York, Philadelphia, and Baltimore. I see many of these boats are ordered especially for the cargo they are to carry, and they come down light, and this is expensive. If they could come down with a cargo and be sure of a return cargo it would make the freight charges much less. I think it is but a matter of time, now that the Cape Fear River is being made deeper, that we will have a much larger commerce than we ever had. Years ago there were times when we had as many as 40 sailing vessels here waiting to load, but they have changed since then in many respects. Then the charter party called for 50 tons a day loading; now three to four hundred tons a day are called for; and of course, now the loading is done on steamboats. This is a saving in time and is an important element to consider these days. I believe the Northeast River, with its available banks on both sides of the river, gives the only good location in this section for the development or establishment of industries. The location is good for the use of such plants as can be established there; all that is needed is good water to get to them.

1. NEWCOMER. We shall be glad to hear from anyone else who desires to speak.

H. McC. STANFORD. I don't see that I can enlarge in any way on anything that has been said, but I wish to call attention to one detail which I think has been overlooked. The port of Wilmington is getting a black eye for delays which are occasioned here by the factories having to lighter a half of their raw materials. The vessels are delayed here on account of this lighterage, also sometimes for several days in waiting for the tide and to be able to get through the bridge. These facts are well known to the shipping interests, and as a result it is impossible to get as favorable charters as you could otherwise, and it hurts us in competition with other ports where the vessels can tie to the wharves where their cargoes are to be unloaded. I will not say, however, that as a representative of one of the interests here I want to add my dissent to what has been said by the gentlemen in our interest.

1. TAYLOR. How about dredging through this bridge? Is this bridge of such a construction that the proper depth could be had by dredging through it? I have heard that dredging through this bridge might tend to seriously injure it.

1. PAYNE. I will state that I think it entirely practicable to get deeper water through the bridge. In fact, I am informed that the railroad will make any improvement in the bridge which is considered necessary to meet the conditions.

1. TAYLOR. Can you tell me to what depth the piers of this bridge extend?

1. DEVINE. I think I can answer that question. I am not absolutely positive, but my impression is—in fact, I know—that a cylinder was sunk and that is filled with concrete and it is reasonable to suppose that it was carried to rock; at any rate, carried as far as they would be justified to carry it for safety. The data as to this can be found in the Coast Line office. I am sure this can be supplied if you desire it; but the records are filed here in the railroad office—they probably are some 25 or 30 years old.

1. TAYLOR. The center pier is now, I believe, in water about 16 feet deep?

1. DEVINE. That depth at least, if not more.

1. TAYLOR. What form of construction have the other piers?

1. DEVINE. All cylinder, I believe.

1. TAYLOR. You are unable to state how far down they go?

Mr. DEVINE. No; I can not, except that I understand they went down to a point that was considered to be safe. I can't state the depth they are sunk; but it must have been to rock, or to such a depth as was considered proper and safe. I would like to add a few remarks to what has been said. I don't know that I can add very much to strengthen the arguments that have been made, but I would like to make the suggestion that if you feel that this work can not be done at the entire expense of the Government I offer the suggestion—I don't know whether there is anything in it or not—could not the harbor line here be extended to 3 miles above and in that way come in for some part of the appropriation for the improvement of the Cape Fear River? If not share in the present appropriation for the Cape Fear River, then in some future appropriation. If we could not participate in the present appropriation, it might be covered in future appropriations.

Col. TAYLOR. I will state that the project for the Cape Fear River as enacted by Congress extends to certain points or limits; that is, entirely independent of how far the harbor line may extend. The only way this could be accomplished would be by a specific act by Congress. Nothing could be done in the absence of authority from Congress covering this matter proposed by you. It would not be within the province of this board to recommend an extension of the harbor line. They have nothing to do with that subject.

Col. TAYLOR. Any other gentlemen desire to be heard?

Mr. E. T. TAYLOR. I wish to indorse what has been said here to-day.

Col. TAYLOR. Any other gentleman wish to make any remarks on this occasion?

Mr. C. R. STEVENSON. Gentlemen, as a representative of one of the interests on the other side of the bridge, I would like to add my indorsement to what these gentlemen have said. The difficulty the lumber interests have to meet is that they have been practically shut out from shipping by vessels because of the very high rates. Vessels come down here and have nothing to bring down as a cargo, and consequently their rates are higher than if they had a cargo to carry both ways. We therefore have to charter vessels which come down here light, and I will say that at present the rates are in some instances in excess of railroad rates because of that fact.

Col. NEWCOMER. Where do your shipments go?

Mr. STEVENSON. To the eastern ports—New York, Philadelphia, Baltimore, from these points distributed through the eastern markets. We distribute nearly all of our product through the markets of the East.

A VOICE (name of speaker not given). I would like to add our indorsement to what the gentleman has just said.

Col. NEWCOMER. Any other gentleman like to say anything?

Mr. J. S. WILLIAMS.—I desire to say I am very much interested in the deepening of this river, and have been for the last five or six years. I had the pleasure of being before you gentlemen in Washington, with Mr. Bates and Senator Simmons, and then heard our arguments as to the needs of this improvement and as to who would be the principal beneficiaries under it. The same conditions are before us to-day. What benefits one benefits the rest up there; but aside from the direct benefit accruing to these plants by the deepening of this stream, it would mean great benefits to others in that it would mean that we alone would handle about 24 sailing vessels or ships a year, bring by water rock which is now brought by rail. By this method considerable money would be distributed here in Wilmington, and employment furnished to a considerable number of men. We now distribute a good deal of money in this district; we erected our fertilizer plant here realizing the benefits to be derived from that location; but we can not realize those benefits so long as we are compelled to light a portion of our materials. Now, to illustrate, Tuesday there is due here the steamer *Haltie* from Savannah. This boat has a cargo of about 3,700 tons for Savannah and 3,800 tons for Wilmington. This ship goes first to Savannah or to Charleston and either of these points docks direct at the phosphate factory. Here, if she came to a part of the cargo for us would have to be lightered. Now the Wilmington phosphate this cargo would have to be lightered or transferred at the railroad terminals here in Wilmington, which makes the cost here 35 cents more than at either Charleston or Savannah. The result of this state of affairs is that we have 35 cents a ton more to pay in Wilmington than our competitors in Charleston or Savannah have to pay. I am now speaking of canite and the salts used in the manufacture of phosphate. The same thing is true as to nitrates; the nitrate rate is practically the same in all places—Charleston, Savannah, and Wilmington, but in Wilmington here it costs 35 cents more on account of the literage. In many cases the sales are made direct to farmers, who are purchasing in that way more than formerly, and who buy goods to a considerable extent in preference to the mixed or manufactured goods. You can see that our competitors have an advantage of 35 cents a ton over us. As a matter, the deepening of this river would make available many factory sites which are not now occupied, and there is no doubt but that new factories would be

ed there if the river was deepened; but as it is at present, it is not considered advantageous to go in there and put up a plant unless some assurance can be given deeper water will be furnished. If we had this improvement I think within years you would see industries springing up along both banks of this river. They would locate there because of the facilities of navigation afforded them—that they would be on navigable water—water with a sufficient depth to bring goods to them, enable them to ship out their manufactured products. Navigation is absolutely blocked up there, and I think there is no question but what the improvement should be at the expense of the Government. Aside from removing a few snags above the bridge, I don't think much has ever been expended above the bridge. Now, we had located up there. We couldn't locate below on account of the fumes from the sulphur which it is necessary we should use in our manufacture of the phosphate. The fumes destroy vegetation, and it would simply be a matter of continued litigation. In fact there has been some litigation about all the time now, and in some of the cases we have won. We could not locate in the city of Wilmington because there is an ordinance which prohibits phosphate factories from locating within the corporate limits; that is, phosphate plants which burn sulphur. There are two plants in Wilmington, but neither of them acid burning plants. They simply mix the raw material. Of course, they come in competition with us. One of these plants belongs to Armour & Co.—located here in the city—in which they use up their refuse material, and this plant comes in direct competition with us. Most of the large meat dealers in the country like Armour and Armour, now have their own plants. Our plants, because they burn sulphur, can not locate below the bridge, but yet we are placed in direct competition with the plants in Wilmington which I have mentioned. If we attempted to locate below the city the fumes of the sulphur would be blown right over the city by the prevailing winds, and that stops us from locating there.

C. LANGFITT. Couldn't you locate below the city, say, a distance of half a mile to three-quarters of a mile, and then have good facilities for shipment?

R. STANFORD. No; I think we would lay ourselves liable for any damages caused by the wind carrying the fumes. In fact, I will say that we have been sued right along the past 8 or 10 years for injury on account of these fumes, and I will say we have won several of these suits, and we probably will be sued as long as we are in business on this account. [Laughter.] We have also won some of these suits, but it keeps us, as we are up there, involved in litigation over these fumes. You can imagine what it would be if we were below the city with the prevailing winds blowing the fumes right over the city. I will state that this nitrate business is controlled by a man concern—the “Geenem Caele,” I believe, is the title. They control the business. We contract for a certain number of tons for the year, and we have absolutely no control over the size of the ships; and when a ship arrives at Wilmington drawing 22 feet of water they can not get up to our factory, and the result is we have to deliver the goods at an additional expense, and this expense amounts to a considerable increase in the cost of production of the manufactured product. In some instances it has been necessary to have the ship go first to Savannah or Charleston and discharge the cargo there, and then come on up to Wilmington. If she came in here first, there would not be enough water for her to come up to our factory, and the result would be a considerable expense to us for lighterage. If we had the ship to our factories up there, this element of lighterage would be eliminated, and we would then be placed on an equal footing with our competitors and could meet their terms.

C. LANGFITT. Any other gentleman like to say anything? We shall be very glad, indeed, to hear from any of you.

M. L. E. HALL. Gentlemen, in the absence of Mr. Corbett, the president of the Wilmington Chamber of Commerce, it becomes my pleasant duty to thank this committee for coming down here and looking into this matter. The commercial organization of this city—the Wilmington Chamber of Commerce—heartily indorses the proposition, feeling, after mature deliberation, that it is for the direct benefit of the port of Wilmington. We recognize, of course, that the private interests materially affected reap the direct benefit from the deepening of this channel, although, as Mr. Corbett has pointed out, the territory adjacent to the city of Wilmington will ultimately reap the benefit from this improvement; and we, as a commercial organization, sincerely hope that the Government will see fit to do this work, and thus materially increase the commerce of this port, which, I think, it has been clearly shown this improvement would do. As vice president of the chamber of commerce, I wish to thank you for this hearing which you have given us.

C. LANGFITT. I desire to ask as to the draft of boats used for carrying this phosphate. Now, if they could bring in 1,200 to 1,800 tons, I should say that in that case the draft would be reduced. The boat could seek a cargo from port to port.

Mr. WILLIAMS. The bill of lading is usually from New York, and, as you say, the boats do seek a cargo from one port to another; but the trouble is that it takes a particular or specially built vessel for this trade on account of the liability of shifting this cargo. It takes a vessel of considerable depth to handle it, and it is only a certain class of sailing vessels that carry this phosphate rock.

Colonel TAYLOR. Then you are more interested in this matter because of the number of vessels coming from abroad bearing the raw material, than in the coastwise boats.

Mr. WILLIAMS. The increase in shipping from the coastwise vessels carrying phosphate rock on one hand, and the size of the boats used by the Germans in carrying the raw material. I spoke of one vessel which had to go down to Savannah to discharge part of her cargo there.

Mr. TAYLOR. I think I can make that point plain. The lighterage here amounts practically an extra cost of 35 cents per ton on this material. At Savannah and Charleston these vessels can dock right at the phosphate factories, and this amount is saved; so it amounts practically to a royalty or excess of 35 cents per ton that has to be paid here in Wilmington, and as a result the Wilmington manufacturer has to recoup his cost by that much to meet the competition from Savannah and Charleston. Charleston and Savannah, in other words, under the present conditions have the advantage over other things being equal, of just that amount over Wilmington, in not having to pay this lighterage.

Mr. WILLIAMS. That is the matter from a competitive standpoint—Charleston has the advantage of us by just that amount.

Colonel TAYLOR. You have equal freight rates on the boats bringing the raw material?

Mr. PAYNE. Yes, we are on equal terms so far as the freight rates are concerned in bringing the goods in; but we have to pay this extra amount which Charleston does not have to pay, for the reason that the vessels can tie up to the wharves of the factories there. Now, a short while ago there was a contract amounting to about \$8,000—manufactured goods. We tried to get it, but Charleston took the business. Underbidding 25 cents, and got the contract.

Colonel TAYLOR. You did not get the contract?

Mr. PAYNE. No, sir; Charleston took the business.

Colonel TAYLOR. Where does most of your manufactured products go?

Mr. PAYNE. To the interior of North and South Carolina.

Colonel TAYLOR. So if the channel were deepened there would be but very little outgoing business—nearly all incoming?

Mr. PAYNE. All incoming—vessels bringing supplies here for the factories.

Colonel NEWCOMER. How is that as to the lumber company?

Mr. PAYNE. The sailing vessels in the lumber business can carry ties, lumber and goods of that character, provided they can find a cargo.

Col. NEWCOMER. I wish to ask if any of these plants here have other factories elsewhere—those here—Charleston or Savannah?

Mr. PAYNE. We have one at Savannah.

Col. NEWCOMER. That was not the plant that took the contract away from you?

Mr. PAYNE. No, sir; that was not the plant. [Laughter.] Of course, I am particularly interested in the plant here, and we are not afraid of competition, and we know that competition will surely come no matter whether the river is deepened or not, but you can readily see that we would be in a better position to meet competition with water to our wharves than we are at present. We, of course, realize that the improvement to this stream will be of benefit to our property and business. We do not admit that. But it is a benefit to this entire section as well as to us.

Col. NEWCOMER. I will ask is it not possible that the city or other local organizations will help out with this matter by way of contribution. That is done to a very great extent throughout the country, money appropriated by Congress being contingent upon local cooperation to a certain specified amount or proportion by a city or other organization formed for the purpose. Could not that be done here?

Mr. PAYNE. We have never asked the city. In the first place, Wilmington is a railroad terminal. They are bringing cotton here and exporting cotton, and the railroad terminal facilities are all on deep water, and of course I suppose the railroad would not want us to have deep water; it would take freight away from them; and therefore we have never asked the city to help in the matter.

Col. NEWCOMER. Would anything beyond local transportation be affected?

Mr. PAYNE. Yes; such rock as they now haul from Florida for us.

Col. NEWCOMER. I don't understand the difficulty you would have with carrying, say, about 1,800 tons of cargo.

Mr. PAYNE. I will state that our vessels average between 18 and 20 feet, and it is nearly always necessary to take out half of the cargo before they can get up.

at. That is just the difficulty we wish to avoid—this matter of lightering the cargo.
 r. TAYLOR. I think it has not been the policy of the Government to require any-
 g of local private interests, except perhaps in the matter of terminals and transfer
 ities; but I fail to see that this matter has any bearing upon the question of termi-
 at all. It seems to me that it is simply a matter of dredging this river—

ol. TAYLOR. I will state that the requirements of the Government in local mat-
 affecting commerce are not limited to terminals by any means, and that in a
 e number of instances money has been contributed by different localities. There
 numerous instances. At Portland, Oreg., there is a corporation known as the
 rt of Portland," with power to levy taxes to a certain extent, even outside the limits
 e city of Portland, and they have contributed a very large part of the expenses of
 rovement of the Columbia River, and only recently they have contributed \$500,000
 ard the construction of jetties at the mouth of the river, 110 miles away.

r. TAYLOR. The appropriation of money for improvements outside of the limits
 e city could not be made—there is no power in the city to do this.

ol. TAYLOR. That could easily be fixed. Get a State law passed, if you are inter-
 d in it. Quite a number of States have done that.

r. J. A. TAYLOR. I would like to offer a resolution, with your kind permission,
 ch I will read and leave with your committee. (Reads:)

The Wilmington Chamber of Commerce has repeatedly indorsed the project for
 improvement of the North East River from Hilton Bridge to a distance of
 miles, covering sites now occupied by various manufacturing industries,
 opening the possibility of an extensive field for the development of like
 rests, and expressed the opinion that the project is essentially of a public char-
 er and should be prosecuted entirely at the expense of the General Government.
 welcome to Wilmington the representatives of the board of engineers, who have
 ed the further presentation of this matter, and with entire confidence in our cause
 anticipate a favorable decision by the board, committing the Government to a
 pedy prosecution of the project." (Exhibit C.)

r. L. E. HALL. Gentlemen, the Wilmington Chamber of Commerce has passed
 a resolution several times, and we feel quite sure that it will be passed again.
 etlemen of the Wilmington Chamber of Commerce, you have heard the resolution
 ch has just been read; those in favor of adopting it as the resolution of the Wil-
 ington Chamber of Commerce manifest it by saying "aye." (Unanimous.) Those
 posed "no." (No response.) I pronounce it carried.

ol. TAYLOR. Anyone else who wishes to say anything? If not, I will call the
 ating closed.
 Closed.)

EXHIBIT A.

MEMORANDUM.

here are located on the Northeast River, within a distance of $1\frac{1}{2}$ miles north of
 ton Bridge, the following industries: American Agricultural Chemical Co.; Virginia-
 olina Chemical Co.; Swift's Fertilizer Co.; Camp Lumber Co.

hese properties are capitalized at one and one-half million dollars; have an annual
 roll of \$355,000; turn out manufactured product annually of 150,000 tons; reship
 exterior factories crude material to amount to 20,000 tons.

resent depth of water, 16 feet, high tide; proposed depth of water, 22 feet, low tide;
 ec of improvement, \$52,000.

resent depth of water involves lightering annually 35,000 tons of material, at a cost
 of \$9,000. Phosphate rock from Florida moved by rail, 37,000 tons, at an excess cost
 or water transportation of \$10,000.

Estimated increase of water-borne tonnage in raw material of 50,000 tons, with a
 th of 22 feet of water.

eneral Government has improved Ashley River 4 miles for the accommodation of
 eilizer factories without any contribution of expense from private interests.

ocation of fertilizer factories north of Hilton Bridge made necessary by city ordi-
 nance.

EXHIBIT B.

PETITION OF INTERESTED PARTIES.

WILMINGTON, N. C., *October 17, 1913.*

GENTLEMEN: We, the petitioners most directly interested in the desired improve-
 ment of the deepening of the Northeast Channel of the Cape Fear River for a distance
 approximately $1\frac{1}{2}$ miles above the Hilton Bridge, greatly appreciate the interest

that your honorable board has shown in this desired improvement, and we also feel that from the great interest shown at the hearing before your committee at Wilmington to-day by the business interests in general of the city of Wilmington will convince you that this improvement will not only benefit us but be a great benefit to the entire business interests of Wilmington and a large portion of the State of North Carolina.

We note from Document No. 1356 of the third session of the Sixty-third Congress that this improvement is recommended by Gen. W. H. Bixby, Chief of Engineers, United States Army, and Col. William T. Rossell, Corps of Engineers, senior member of the board, with the proviso that the manufacturers located on the Northeast Cape Fear River bear one-half of the expense.

Now, as it is the consensus of opinion that this improvement should be made, it is our purpose to endeavor to show to your honorable board that this improvement should be made and maintained by the Government as well as any other harbor improvement that is made to encourage manufacturing and to give the community at large the benefit of transportation derived from a natural waterway.

In our petition to your honorable board of May 8, 1912, we submitted to you figures showing tonnage that we would transport to our several factories provided we had sufficient depth of water to bring vessels direct to the several factories, and we also stated the amount of money that we were paying out in wages and salaries. Since the petition was made all of the several companies have had heavier demands upon them for their products, and one company, the American Agricultural Chemical Co., has completed their plant, and their present requirements in incoming cargoes, as well as the amount of wages and salaries, have largely increased.

These industries were located through a large expenditure of money and they are now helpless as far as receiving their incoming cargoes in competition with other ports.

Under dates of August 7 and 8, 1913, we submitted to Maj. H. W. Stickle, United States Army, port of Wilmington, a statement of tonnage which we were compelled to lighter from vessels from Wilmington Harbor to our works, which showed a total tonnage of 34,067 tons, which does not include 37,306 tons of phosphate rock which we were compelled to bring to Wilmington by rail for want of sufficient depth of water on the Northeast Cape Fear River.

It is a fact that the manufacturing interests above Wilmington will be directly benefited by this improvement, but it is also a fact that the location of these factories is the only location that they could secure, for two reasons:

First. Owing to the nature of their business, they are not allowed to locate within the city limits.

Second. Owing to the lack of railroad facilities, they were unable to locate south of the city, where deep water can be secured.

For these reasons, if Wilmington is to become a larger fertilizer center it will be necessary that a channel of sufficient depth to allow foreign vessels, the size of which we can not regulate or control, to bring their cargoes direct to the factories, be located and the territory above Hilton Bridge is the only available and logical location for these new industries. We can, if necessary, show to you gentlemen that the port of Wilmington is now suffering for the lack of vessels to take cargoes from this port on account of the unreasonable rate charged by vessels to come here empty for outgoing cargoes.

Again we beg to call your honorable board's attention to the fact that the ports that are the largest competitors of Wilmington in the manufacturing of fertilizer, namely, Norfolk, Charleston, and Savannah, all have locations suitable for the manufacturing of fertilizer on deep water, and it is a recognized fact that a community owes to a large extent its prosperity and future greatness to its manufacturing industries.

If we are permitted to bring our phosphate rock to Wilmington by water, it will mean from 20 to 30 additional vessels coming to this port every year, and these vessels will secure an outgoing cargo which will enable the shippers to secure more favorable freight rates, and place them in a position where they can count on these vessels to handle their products, while at present it is a question with them, at all times, when to locate a vessel to come to Wilmington empty for a cargo at a rate which enables them to compete with other ports.

We feel confident that your honorable board, now having had your representatives to go over this desired improvement, visit our factories, seeing the large amount of money that we have expended, that they will recognize the necessity of this improvement and the benefit that will be derived by the entire community, and we trust

t, after considering these facts, you will conclude that the entire expense of improvement should be borne by the Government, and will so recommend to honor, the Secretary of War. We are,

Very respectfully,

AMERICAN AGRICULTURAL CHEMICAL CO.,
By R. T. PAYNE.

VIRGINIA-CAROLINA CHEMICAL CO.,
By E. T. TAYLOR, *Manager*.

SWIFT FERTILIZER WORKS,
By H. McC. STANFORD, *Superintendent*.

CAMP MANUFACTURING CO.,
By JNO. R. STEPHENSON, *Superintendent*.

of the BOARD OF ENGINEERS FOR RIVERS AND HARBORS.

EXHIBIT C.

The Wilmington Chamber of Commerce has repeatedly indorsed the project for the improvement of the Northeast River from Hilton Bridge to a distance of $1\frac{1}{2}$ miles, clearing sites now occupied by various manufacturing industries and opening the possibility of an extensive field for the development of like interests, and expressed opinion that the project is essentially of a public character and should be prosecuted entirely at the expense of the General Government.

We welcome to Wilmington representatives of the Board of Engineers, who have had the further presentation of this matter, and with entire confidence in our cause anticipate a favorable decision by the board committing the Government to a speedy prosecution of the project.

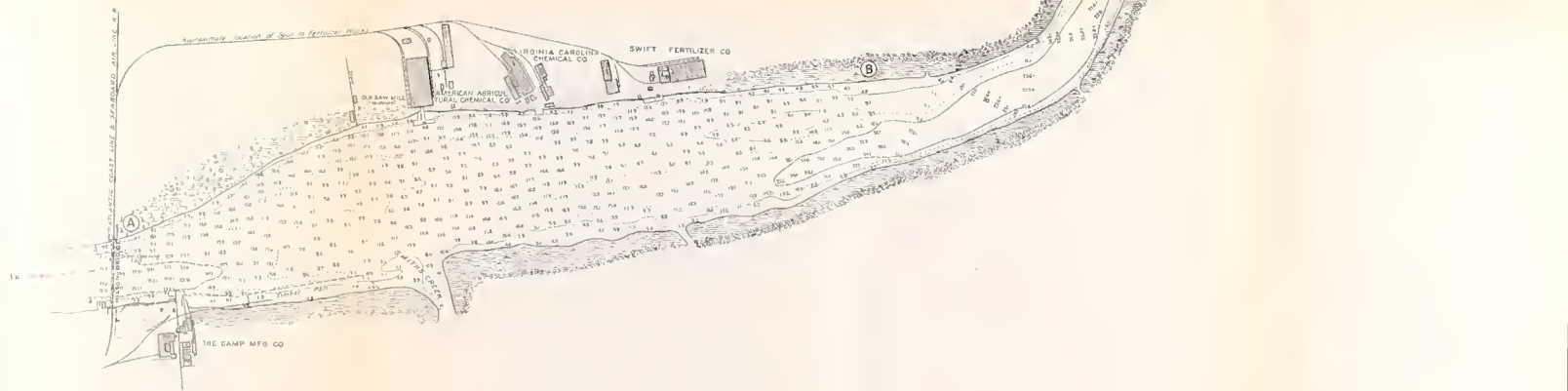




VICINITY SKETCH



Taken from Coast Chart No. 823



NORTHEAST

CAPE FEAR RIVER, N. C.

FROM HILTON BRIDGE TO A POINT 3 MILES ABOVE

PORTION FROM 1 TO B SURVEYED AND DRAWN UNDER THE DIRECTION OF

CAPTAIN EMILY BROWN CORPS OF ENGINEERS U. S. ARMY

HOWEVER 1902

FROM B TO C SURVEYED JULY 1903 UNDER THE DIRECTION OF

MAJOR H. W. STICKLE CORPS OF ENGINEERS U. S. ARMY

N. C. HERBERT ASSISTANT ENGINEER

SCALE OF FEET
0 100 200 300 400 500 600 700 800 900 1000

FIELD NOTE NO. 1
JULY 1903
C. J. JOSEPHINE JR. DTD
U. S. ARMY ENGINEER

1:15 HORIZ.
1:10 VERT.
LITHO BY J. H. HARRIS
MADE AT WASHINGTON

1. CHIEF'S OFFICE WILMINGTON N. C.

AUGUST 12 1913

FORWARDED TO THE CHIEF OF ENGINEERS U. S. ARMY

WITH REPORT OF THIS DATE

H. W. Stickle
MAJOR CORPS OF ENGINEERS U. S. ARMY

